APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/713,121	11/15/2000	William D. Nations	PA-Y0014	3359

7590 06/09/2004	**EXAMINER**
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Patent Administrator	

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ART UNIT	PAPER NUMBER
2681	18

DATE MAILED: 06/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 March 2004*.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8,10-17,19-25 and 27-33* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *11-17,19-24,32 and 33* is/are allowed.

6)☒ Claim(s) *1-8,10,25 and 27-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   This is in response to the Applicant's arguments filed on March 26, 2004 in which

claims 1-8, 10-17, 19-25, and 27-33 are currently pending.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims   1-8, 10-17, 19-22, 25, and 27, 29-31 are rejected under 35 U.S.C.

103(a) as being unpatentable over Adiwoso et al. (US 5,963,862) in view of Kikinis (US

6,205,485).

Regarding claims 1, and 25, Adiwoso teaches a data transmission system (i.e.,

illustrated in figs. 1 and 12 comprising: a two-way communication link (25) comprising at

least one satellite (i.e., satellites 12, 13) at leas one user terminal (20) having two-way

communication with the two-way communication link (25); and comprising inherently a

memory for storing data broadcast by way of the satellite of the two-way communication

link (i.e. huge amount of information (gigabytes) flowing in the forward link from satellite

to the terminal, col. 5, lines 59-67), a software which retrieves information requested by

way of the user terminal and information related to the requested information (i.e.,

terminal 20 typically a software to perform the function of multi-media terminal in col. 5,

line 33 to col. 6, line 36); and at least one gateway (30 or 300) having access to data

(i.e., access information on internet and having two-way communication with the two way communication link (figs. 1 and 2, links 45, 46).

Adiwoso does not specifically teach the terminal having a cache for caching broadcasted data from the satellite.

However, the preceding limitation is known in the art of communications. Kikinis teaches a communication terminal (e.g., a set box) receives a video stream from satellite 113 via a special driver and put into a cache, which is considered as part of memory system (col. 6, lines 60-67). Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to implement the cache taught by Kikinis within the system of Adiwoso in order to store the programming pages in the cache of memory system. Thus, those pages found in the cache do not have to be searched from the Internet by modem, but can be taken directly out from the cache (col. 7, lines 5-25).

Regarding claim 2, Adiwoso in view of Kikinis teaches all the limitations. Adiwoso further teaches the two-way communication link comprises a low bandwidth two-way communication link (col. 6, lines 35-40).

Regarding claims 3, 5, and 7, Adiwoso in view of Kikinis teaches all the limitations. Adiwoso teach the two-way communication link comprises a Ku-band and Ka-band (col. 6, lines 63-67).

Regarding claim 4, Adiwoso in view of Kikinis teaches all the limitations. Adiwoso further teaches the two-way communication link comprises a high bandwidth data broadcast link (col. 6, lines 41-45).

Regarding claims 6, 8, Adiwoso in view of Kikinis teaches all the limitations. Adiwoso teaches the Ku-band and Ka-band provides a plurality of spot beams that covered selected coverage regions (col. 7, line 62 to col. 8, line 9).

Regarding claims 10 and 27, Adiwoso in view of Kikinis teaches all the limitations. Adiwoso further teaches the gateway (30) typically comprises a storage device, but not a cache.

However, the use of cache as part of memory system is disclosed in the system of Kikinis (col. 6, lines 65-67). Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to implement the cache taught by Adiwoso as part of the memory system in order to store video data received from the satellite.

Regarding claims 11, and 29, Adiwoso in view of Kikinis teaches all the limitations as recited in claim 1 and 25 above. Adiwoso further teaches generating requests for data at the at least one user terminal (col. 9, lines 60-67); transmitting the requests for data from the at least one user terminal by way of the two-way communication link to the at least one gateway (col. 9, lines 60-63, col. 10, line 16-43); obtaining the requested data at the at least one gateway (col. 10, lines 27-57); and transmitting the requested data from the at least one gateway to the at least one user terminal by way of the two-way communication link (col. 10, lines 27-57).

Regarding claims 12-16, Adiwoso in view of Kikinis teaches all the limitations. Adiwoso further teaches transmitting the requests for data comprises transmitting the requests for data by way of low bandwidth communication link, low bandwidth satellite

communication link, low bandwidth terrestrial communication link, or low bandwidth

wireless communication link (col. 4, line 31 to col. 5, line 53, col. 6, lines 35-40).

Regarding claim 17, Adiwoso in view of Kikinis teaches all the limitations.

Adiwoso further teaches transmitting the requests for data comprises transmitting the

requests for data by way of high bandwidth data broadcast link (col. 5, lines 1-7; col. 6,

line 41-47).

Regarding claims 19, 20, Adiwoso in view of Kikinis teaches all the limitations.

Adiwoso further teaches obtaining the requested data at the at least one gateway using

a user's request history to obtain the requested information which is equivalent to the

step of obtaining the requested data at the at least one gateway comprises using a

user's user profile to obtain the requested information, (reads on the gateway is in

communication with a billing function to generate data/bill related to specific subscriber

unit for authorization purpose, col. 4, lines 50-60, col. 5, lines 1-50).

Regarding claim 21, Adiwoso in view of Kikinis teaches all the limitations.

Adiwoso further teaches obtaining the requested data along with data related to the

requested data at the at least one gateway (col. 4, lines 50-60, col. 5, lines 1-50), and

transmitting the requested and related data from the at least one gateway to the at least

one user terminal by way of the two-way communication link (col. 5, line 33 to col. 6,

line 3, col. 10, lines 4-16).

Regarding claim 22, Adiwoso in view of Kikinis teaches all the limitations.

Adiwoso further teaches storing the requested and related information at the gateway

(col. 13, lines 38-54).

Regarding to claim 29, the claim is interpreted and rejected for the same reason as set forth in the rejection of claims 1, 4, and 7.

Regarding claims 30-31, Adiwoso in view of Kikinis teaches all the limitations. Kikinis further teaches the cache has a size on the order of 30 gigabytes or multi-gigabyte hard disk (i.e., inherently present in the cache memory to store huge amount of information forwarded from the satellite to the terminal col. 6, line 41 to col. 7, line 16).

4.   Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Adiwoso et al. (US 5,963,862) in view of Kikinis (US 6,205,485) further in view of Stephens et al. (US 6,519,262).

Regarding claim 28, Adiwoso in view of Kikinis teaches all the limitations above except the terrestrial communication link for transmitting the requested data to the at least one user terminal in the event that the satellite broadcast link becomes inoperative.

However, the preceding limitation is known in the art of communications. Stephens teaches for satellite broadcast systems, it is generally desirable to have complimentary terrestrial transmitters should the satellite transmitters (col. 2, lines 3-5). Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to implement terrestrial transmitters taught by Stephens within the system of Adiwoso in view of Kikinis in order to avoid dropped calls and make the communications system more reliable.

Allowable Subject Matter

5.   Claims 11-24, 32 and 33 are allowed.

Response to Arguments

Applicant's arguments filed 3/26/04 have been fully considered but they are not persuasive.

Applicants argue that in Adiwoso et al U. S. 5,963,862 there is disclosed "An integrated telecommunications system provides fixed and mobile satellite-based services via one or more geosynchronous satellites. Two-way user links are provided by the satellites to user terminals located throughout a geographical region. Additionally, the satellites provide two-way access links to gateway stations within the region, and also to a satellite network control center. The network control "center controls bandwidth and power of the satellites to establish the user links and the access links. A mobile cellular telephone network provides mobile cellular telephone service to a subscriber that also has a user terminal. A gateway station includes a gateway station controller coupled to a mobile switching center, which, in turn, is coupled to a terrestrial network. The gateway station controller provides control signals route calls to either the user terminal or the mobile cellular telephone of the subscriber based on a single dialed number."

Applicants respectfully submit that at col. 5, lines 59-67 of Adiwoso et al there is disclosed "For example, in the situation where a user requests on-demand Internet access through the satellite, there is usually a huge amount of information (gigabytes)

flowing in the forward link from the satellite to the user terminal, with very little

information (kilobits) being sent via the return link. In response to such demands, the

NCC can allocate a large information transfer bandwidth for the forward link, and, at the

same time, allocate a narrow bandwidth for transmissions in the opposite direction (i.e.,

the return link)."

Applicants respectfully contend in col. 5, line 33 to col. 6, line 36 there is a wide

ranging discussion of Fig. 1, illustrating a number of user terminals that may be

employed and their configuration with other devices at the user's premises depending

on the desired range of services. There is a further discussion of asymmetrical links

which are created when unequal bandwidths are allocated between the forward link and

the return link of a telecommunication. There is further discussed the invented

telecommunication system that can literally accommodate millions of users each of

which may request any of a broad range of services.

Applicants respectfully submit that no where in col. 5, lines 59-67 or col. 5, line

33 to col. 6, line 36 nor in Figs. 1 and 2 focusing on links 45 and 46 is there disclosed

the cache for selectively caching data broadcasts by way of the satellite of the two-way

communication link, nor is there disclosed software which retrieves information

requested by way of the user terminal and information related to the requested

information.

In Kikinis U. S. 6,205,485 there is disclosed "A multimedia broadcast system

provides program schedule information simulcast as a Hyper Text Markup Language

(HTML) data stream including commands and displayable, selectable indicia associated

with the commands, along with programs for display. A set top box is adapted to

separate the HTML data stream and to store that data in a cache as WEB pages

retrievable by a WEB browser in the set top box, whereupon the program schedule

information is displayed including the displayable, selectable indicia. Selecting the

indicia directs the set top box via the associated command to tune to a

"program associated with the displayable indicia. The indicia may be any text, icon,

dynamic figurine, and the like. In a preferred embodiment program schedule WEB

pages, including the commands and displayable indicia, are stored especially marked

on a WEB server coupled to the Internet and to a scanner adapted to scan the WEB

server for marked pages, and to upload the marked pages to a satellite broadcast

system."

Applicants respectfully submit that no where in Adiwoso et al, directed to an

integrated telecommunications system providing fixed and mobile satellite based

services via one or more geosynchronous satellites employing two-way user links to

user terminals located throughout a geographical region which provide two-way access

links to gateway stations within the region and also to a satellite network control center,

is there any suggestion or implication that it would have been obvious to one of ordinary

skill in the art at the time of the invention to implement the cache taught by Kikinis,

directed to a multimedia broadcast system providing program schedule information

simulcast as a Hyper Text Markup Language (HTML) data stream including commands

and displayable selectable indicia associated with commands along with programs for

display, within the system of Adiwoso et al in order to store the programming pages in

the cache of memory system. Further, Applicants respectfully contend that Kikinis no

where remedies the obvious deficiencies of Adiwoso et al with regard to the requisite

cache as described in addition to the software which retrieves information requested by

way of the user terminal and information related to the requested information.

Applicants respectfully submit, by virtue of the obvious deficiencies in Adiwoso et al as

recited above with regard to the cache and software and the failure of Kikinis to remedy

these deficiencies even if improperly combined with Adiwoso et al as suggested by the

Examiner, this ground of rejection must fail.

However, the Examiner disagrees with preceding assertion recited above.

Adiwoso teaches a two-way communication device receives huge amount of information

(i.e., the information is store in the two-way device) from the satellite based on user

request; typically the two-way communication device includes software that controls the

functioning of the hardware and directs the operation of the two-way communication

device (col. 5, line 54 to col. 6, line 57). Kikinis further teaches huge amount of

information (video stream) is received from a satellite and put into a cache (col. 6, lines

60-67 and col. 7, lines 5-25). The combination of Adiwoso and kikinis can allow the user

to selectively request on-demand Internet access via the satellite, receive from the

satellite huge amount of information, and put the information into a cache memory.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of

the invention, to implement the cache taught by Kikinis within the system of Adiwoso in

order to store the programming pages in the cache of memory system. Thus, those

pages found in the cache do not have to be searched from the Internet by modem, but can be taken directly out from the cache.

Regarding claim 2, the Applicant further argues that Adiwoso does not necessarily teach the claimed invention at col. 6, lines 35-40. However, the Examiner interprets the range of frequency taught at col. 6, lines 35-60 as low bandwidth two-way communication link.

Applicants further argue regarding claims 3, 5 and 7, that Adiwoso et al in view of Kikinis does not necessarily teach the claimed invention. However, the Examiner contends that Adiwoso et al teaches the two-way communication link comprising a Ku-band and Ka-band at col. 6, lines 63-67.

Applicants further argue with regard to claim 4 that Adiwoso et al in view of Kikinis does not necessarily teach the limitation of claim 4. However, at col. 6, lines 41-45 Adiwoso teaches "A single beam access link is provided at X-Band radio frequencies in which the uplink frequency is in "the 7900-8400 MHz and the `downlink' frequency range is 7250-7750 MHz. This teaching is functionally equivalent to the claimed invention high bandwidth.

Applicants further argue regarding claims 6 and 8, Adiwoso et al in view of Kikinis fail to teach the Ku-band and Ka-band provide a plurality of spot beams that covered selected coverage regions. However, the Examiner disagrees with the preceding assertion because in the cellular system each spot beam represents a coverage area. Therefore the limitations of claims 6 and 8 are read on Adiwoso, col. 7, line 62 to col. 8, line 9.

Applicants further argue regarding claims 10 and 27, Adiwoso et al in view of

Kikinis teaches all the limitations and that Adiwoso et al further teaches the gateway

(30) typically comprises a storage device, but not a cache. However, the use of cache

as part of memory system is disclosed in the system of Kikinis (at col. 6, lines 65-67) in

order to store video data received from the satellite.

Applicants respectfully contend that at col. 6, lines 65-67 of Kikinis there is

disclosed "This data stream is delivered via a special driver 320 and put into a cache

322, which may be considered a part of memory system 166 in Fig. 2."

Applicants further argue regarding claim 28, Adiwoso et al in view of Kikinis fails

to teach all the limitations above except the terrestrial communication link for

transmitting the requested data to the at least one user terminal in the event that the

satellite broadcast link becomes inoperative. However, the Examiner believes the

limitation of claim 28 is read on Stephens et al wherein Stephens teaches

complimentary terrestrial transmitters should the satellite transmitters fail, citing col. 2,

lines 3-5 in order to avoid dropped calls and make the communications system more

reliable.

Applicants further argue regarding claims 30-31, Adiwoso et al in view of Kikinis

teaches all the limitations and that Kikinis further teaches the cache has a size on the

order of 30 gigabytes or multi-gigabyte hard disk (i.e., inherently present in the cache

memory to store huge amount of information forwarded from the satellite to the

terminal). A considerable size of memory is required to receive huge amount of video

stream from satellite. The claimed limitation is read on Kikinis (col. 6, line 41 to col. 7, line 16).

In response to Applicant's argument that the combination is improper, it has been held that the test for obviousness is not whether the features oz one reference may he bodily incorporated into the other to produce the claimed subject matter but simply what the combination of references makes obvious to one of ordinary skill in the pertinent art. In re Bozek, 163 USPQ 545 (CCPA 1969).

Conclusion

6.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.
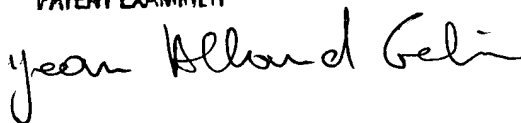
7.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean A Gelin whose telephone number is (703) 305-4847. The examiner can normally be reached on 9:00 AM to 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Erika A Gary can be reached on (703) 308-0123. The fax phone number for

the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

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JEAN GELIN
PATENT EXAMINER
JGelin
June 4, 2004